

Application No. 10/601,404  
Amendment dated April 25, 2006  
Reply to Official Action of February 16, 2006

## REMARKS

Claims 1-10 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,353,560 to Heydon ("Heydon") in view of U.S. Patent No. 5,687,538 to Frobosilo et al. ("Frobosilo et al.") and U.S. Patent No. 5,956,916 to Liss ("Liss"). The Official Action provides that "Heydon discloses an apparatus for supporting a plurality of joist [sic-joists], figure 8." The Official Action further provides:

Heydon clearly show openings through the web but [does] not specifically disclose the same as does the joist 9 of Liss. The joist of Liss includes a tab and an opening 11 through the web. Specifically the tab comprises a portion of the web bent outward from another portion of the web at an angle. It would have been obvious to one of ordinary skill in the art to modify Heydon to include the opening through the web providing a convenient means to form the tab while strengthening the structure of the web as shown.

Heydon lacks the reinforcing rib corresponding to each of the tabs and provided in each said web adjacent said corresponding tab. Frobosilo et al. discloses a joist with reinforcement ribs 74a/76/78 adjacent the opening 60. Frobosilo et al. includes at least one other reinforcing rib 74a adjacent each opening. The reinforcing ribs comprise indentations that are embossed on a surface of the web. See column 5, lines 10-45. It would have been obvious to one of ordinary skill in the art to modify Heydon to include the ribs adjacent the openings 60 to improve the resistance to stress distortion and torsional stress as taught by Frobosilo et al. With the vertical ribs added, the vertical surface of the rib would be parallel to the tab.

Responsive to these statements, Applicant respectfully submits that Section 2143.01 of the *Manual of Patent Examining Procedure* ("MPEP") provides that there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify or combine reference teachings. As will be

discussed below, although the three cited references deal with building construction components, their similarities end there and, as will become evident, there is no motivation to combine their teachings to achieve the subject matters of claims 1-10.

Turning first to the base reference - Heydon, the elongate track 44 disclosed in that reference comprises the bottom track for a **wall** structure. It does not support joists; instead it supports vertically extending posts. Heydon also provides:

The track 44 is preferably formed having a generally U-shaped configuration defining a bottom wall 46 and opposing side walls 48 which extend upwardly from the bottom wall 46, as seen in FIG. 9, the track 44, and more particularly **the bottom wall 46 thereof, is adapted to rest on the plywood sheet 38 or other finishing material of the floor structure 12** and is secured to the underlying mud sill 28 via a plurality of fasteners 50 such as self tapping screws.

Column 9, lines 57-66 (emphasis added). Thus, it is clear from the foregoing passage that the bottom wall 46 of the bottom wall track 44 is **fully supported on the floor**.

Turning next to Liss, this reference discloses an improved "ledger beam". Liss explains that ledger beams "are horizontally affixed above the soil level to concrete foundation walls." See column 1, lines 18-20 of Liss. As can be seen in Figures 1, 2, 4, 7, and 8 of Liss, the web of the ledger beams are affixed **directly to the flat wall surface**. Liss provides:

- "Referring next to FIG. 7 shown are shear tab ledger members fixably attached to foundation walls." Column 4, lines 5 and 6 of Liss.
- "Shear tab ledger members 9 are fixable attached to foundation walls." Column 4, lines 11 and 12 of Liss.

Thus, the web of the Liss ledger beam is **attached to and is in contact with** the foundation wall

across its entire vertical width.

Turning next to Frobosilo et al., this reference discloses a floor joist with a “built-in truss-like stiffener”. Figure 3 illustrates the Frobosilo joists in use. As can be seen in that Figure, the ends of the joists 10 are supported on wood sills 38. However, the middle expanses of the joists are unsupported and are very susceptible to undesirable deflection. In describing their invention, Frobosilo et al. provide that “[a]s a result, the floor joist with the built-in truss-like stiffener **deflects less** creating a more rigid floor system minimizing any spring or bounce action occasionally associated with metal framed floors.” Column 1, lines 59-62 of Frobosilo et al. (emphasis added). Frobosilo et al. further disclose that “[t]he present invention is much more rigid than a typical C-joist in shear deformation and therefore will **deflect less** and support a greater load over a given span...” Column 2, lines 9-13 of Frobosilo et al. (emphasis added). Frobosilo et al. also teach:

One significant aspect and feature of the present invention is a metal floor joist with a built-in truss-like stiffener. The metal floor joist which **minimizes floor deflection and buckling** of thin walled web and in certain fields of application eliminates the need for commonly used web stiffeners, hence reducing the amount of materials in the application process resulting in both material and labor savings. **By minimizing deflection**, the present invention eliminates any spring or bounce action occasionally associated with metal framed floor systems.

Column 3, lines 11-20 of Frobosilo et al. (emphasis added).

As can be appreciated from the foregoing passages and from reference to Figure 3 of Frobosilo et al., the floor joists have a large span that is unsupported and susceptible to deflection and buckling under load. Frobosilo et al. teach that the built-in truss-like stiffeners of their joists

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are directed to minimize such deflection.

As was discussed above, however, the bottom wall 46 of the Heydon bottom wall track does not suffer from these deflection problems because it is **entirely supported** on the floor surface. Likewise, the “shear tab ledger planar surface 10” of the Liss ledger beam is attached to, and is **coextensively in contact with**, the foundation wall. As such, the web of the Liss ledger beam does not experience the degree of deflection problems associated with floor joists that extend **between walls** and have large unsupported spans.

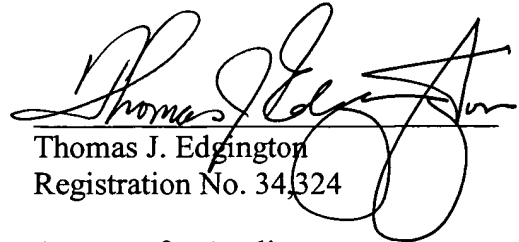
Accordingly, Applicant respectfully submits that there is no teaching to combine the Frobosilo et al disclosure with the Heydon and Liss disclosures. In fact, Applicant submits that the **increased tooling and manufacturing costs** associated with embossing stiffeners into the webs of the Heydon wall track and/or the Liss ledger beam are clear disincentives for making such modifications – particularly in view of the fact that several of such components are commonly employed in a single structure and could result in significant increased manufacturing costs for the structure. Thus, Applicant respectfully submits that a *prima facie* case of obviousness has not been established with respect to the pending claims.

Applicant has made a diligent effort to respond to the rejections and objection presented in the Official Action and submits that all of the pending claims are in condition for allowance. Accordingly, reconsideration and withdrawal of such rejections and passage to allowance of all the pending claims are earnestly solicited. If the Examiner has any remaining concerns concerning the patentability of any of the claims, she is invited to contact the undersigned at the

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telephone number set forth below, so those concerns may be expeditiously addressed.

Respectfully submitted,



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